

CLAIMS

1. A method for the pretreatment of chips that are fed to a sulphate cooking process in which stored chips that are at ambient temperature are heated, and in association with this heating are formed into a slurry with alkali impregnation fluid before cooking in the digester characterised in that the chips before heating in a closed pretreatment step are formed into a slurry with an acidic treatment fluid, which forms a mixture of chips and acidic treatment fluid with a fluid fraction that exceeds 50% and that preferably exceeds 80%, after which the acidified chips are drained such that the drained chips achieve a remaining free fluid fraction that does not exceed 10% and that preferably does not exceed 5%, and where acidic treatment fluid is added essentially only to an amount that corresponds to the amount of acidic fluid that accompanies the drained chips, after which the drained chips are heated to a temperature that does not exceed 140 °C and in association with the heating are formed into a slurry with the alkali impregnation fluid.
2. The method according to claim 1, characterised in that heating of the chips essentially takes place by the addition of warm alkali impregnation fluid.
3. The method according to claim 2, characterised in that the addition of warm alkali impregnation fluid takes place in a vessel in which a flow of alkali impregnation fluid is formed in the vessel that flows in the opposite direction to the flow of chips.
4. The method according to claim 1, characterised in that heating of the chips takes place through the addition of steam to the chips in at least one step, after which the chips that have been heated with steam are formed into a slurry with alkali impregnation fluid.

5. The method according to any one of the preceding claims,
c h a r a c t e r i s e d in that the acidic treatment fluid has a pH that
does not exceed 4-5 and in that the acidic treatment fluid is added to a
treatment vessel in an amount for replacement that corresponds to the
5 amount that accompanies the chips to the subsequent heating by steam.
6. The method according to claim 5 c h a r a c t e r i s e d in that no
continuous withdrawal of acidic treatment fluid takes place from the
treatment vessel in excess of the loss that takes place in the form of acidic
10 treatment fluid that accompanies the drained chips.
7. The method according to any one of the preceding claims,
c h a r a c t e r i s e d in that the alkali impregnation fluid is constituted
by sulphide-rich liquor.
- 15 8. The method according to claim 7 c h a r a c t e r i s e d in that the alkali
impregnation fluid is constituted by a mixture of at least one of sulphide-
rich white liquor, sulphide-rich black liquor and/or sulphide-rich green
liquor, and where the alkali impregnation fluid has a molarity of HS^- that
20 exceeds 0.15 mol/litre, preferably one that exceeds 0.25 mol/litre.
9. The method according to claim 8 c h a r a c t e r i s e d in that the alkali
impregnation fluid has a molarity of NaOH that does not exceed 0.75
mol/litre, preferably one that does not exceed 0.5 mol/litre.
- 25 10. The method according to any one of the preceding claims,
c h a r a c t e r i s e d in that formation of a slurry of the chips in the
acidic treatment fluid takes place during a period of 1-20 minutes,
preferably 5-10 minutes.
- 30 11. The method according to claim 10 c h a r a c t e r i s e d in that the
acidic treatment fluid in the vessel is subject to an external flow against a
heat exchanger for heating of the acidic treatment fluid to a temperature
that exceeds 20 °C while not exceeding 80 °C, preferably 40-60 °C .

- 12. The method according to any one of the preceding claims,
characterised in that the drained acidified chips are heated with
steam in at least one step to a temperature in the range 80-120 °C.